

Services completed for this site

☐ Lot Classifications

☒ Site Contamination Report

☐ Wastewater Management Report

SITE CONTAMINATION REPORT

PREPARED FOR: MELROSS ENTERPRISES
SITE ADDRESS: LOT 1 DP 1202085 323 BOOROWA STREET YOUNG NSW 2594

Revision: 01/07/2021
Site Test: 28/02/2025
Lab Test: 11/03/2025
Job Number: 25016a



DRIVER

Section 4.15 EP&A
1979
SEPP 55

CSM

Source: 1800 m²
former machine &
chem store, house
Pathway: ingestion
Receptor: Infants

SAP

Sample density:
9/1800m²
Building Envelopes 1
Composite samples 3
Replicates 0
Area 0.018 ha

CoPc

As Cd Cr Cu Hg Ni Pb
Zn OC pesticides,
PCBs TRH BTEX PAH

1.0 SUMMARY

An Environmental Assessment was conducted by Envirowest Consulting P/L and a Remediation Action Plan with Validation component cleaned up the fibro shed and the diesel impacted soil about the former Above ground Storage Tanks. These were reported to address most of the former DPI machinery storage and chemical store. Excluded was a <1000 m² area of a weatherboard bungalow at the SW of the property. The bungalow was demolished at some point after 2012. The southmost 1800 m² was assessed to cover the contingency of soil graded E and N from the area excluded by the original study.

Nine soil samples were collected from 150 mm intervals to a depth of 0-0.35 m depending on actual topsoil depth. This was achieved using a mechanical continuous flight auger to break the relatively shallow and compacted overburden. These soil samples were composited in threes. This is typically avoided for hydrocarbons, but acceptable for pesticides and heavy metals. The rationale was that discrete sampling of the latter could be implemented if required. Concentrations of all CoPC were well below commercial thresholds indicating more than acceptable concentrations of CoPC for a commercial development.

2.0 SITE LOCATION YOUNG

LOT 1 DP 1202085
323 BOOROWA
STREET YOUNG
NSW 2594



3.0 SAMPLING RATIONALE AND DESIGN

Aerial Photography

29 January 1969



27 November 1970



17 September 1987



20 December 1997

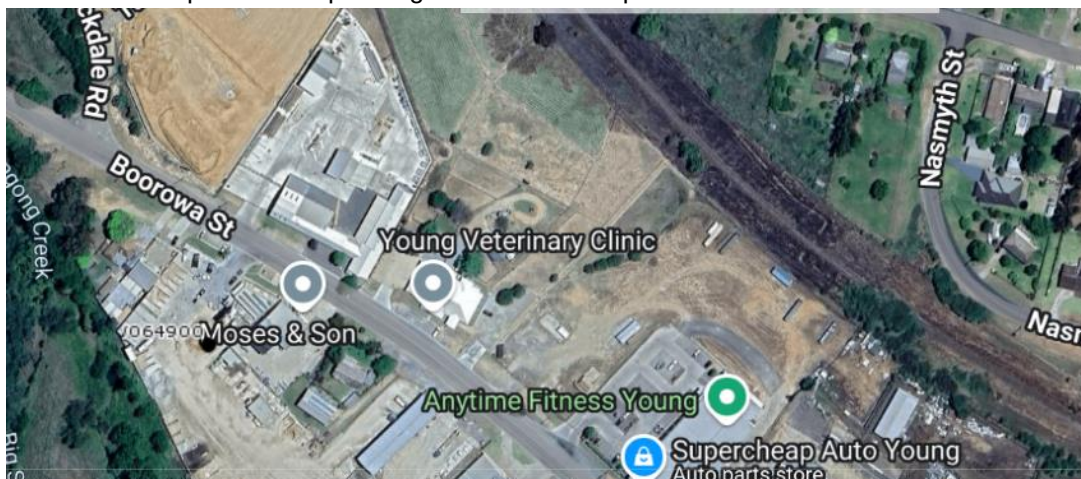


Aerial photography shows that the commercialization of Lot 1 DP 1202085 has occurred over the past 25 years. Prior to the turn of this century, the site was residential. The photography is of relatively poor definition and the previous consultants have addressed the infrastructure that emerged with commercial buildings and fuel storage over the past 25 years.

CSM Conceptual Site Model

The Conceptual Site Model is simplified by the previous detailed investigation, remediation validation and extensive reporting conducted by Envirowest Consulting P/L.

The CSM is further simplified by the distal of ground water sources. There are five bores within 0.5 km of the BE. Four bores are <10 m deep and one appears to intercept vadose water at 3.9 m bgs. The fifth yields .06L/s with a 14 m SWL. Soil samples were thus surficial. Further the subsamples were composited. This is typical for metals and pesticides, but abnormal for hydrocarbons. Hydrocarbons were a qualitative measure since the previous investigation validated the Above Ground Storage Tank area at the E of the lot if the soil was spread to strip during the remediation phase.



CoPC was limited to topsoil immediately above the graded fill. The fill was moved about during past works and it is the silty organic topsoil layer that has the greatest potential for accumulation and absorption of residues of pesticides, metals and hydrocarbons. topsoil residues are indicated to be minimal. The potential contaminants deriving from the AGST are: Total Recoverable Hydrocarbons; Monocyclic and Polycyclic Aromatic Hydrocarbons and Lead

There are further issues that significantly simplify the CSM.

- 1) No aerial evidence of further tank locations (although the pixilation is fair at best)
- 2) No evidence of Underground Storage Tanks (USTs)
- 3) No aerial evidence of rural vehicle accumulation.
- 4) No evidence of greater aggregation of buildings

SAP Sampling & Analysis Plan

Sampling and Analysis Planning addressed the area of the dwelling omitted from the previous validation, with some overlap to account for omissions. Borehole placement was both judgemental and generally systematic, and minimal for statistically meaning calculations. Nine soil samples were taken from 150 mm topsoil depth intervals at a rate of 1/200 m². The rationale was that judgemental sampling of this specific and small areas ought to provide a worst-case scenario if indeed any should exist. Three composite samples were prepared, no replicates. Samples were dispatched with chain-of custody documentation for CoPc Analysis relevant for the recommendations and CoPc of previous reports.

CoPC Contaminants of Potential Concern

Contaminants of Potential Concern are heavy metals (As Cd. Cr, Cu, Hg, Ni, Pb, Zn); general organochlorine pesticides and hydrocarbons: specifically Total Recoverable Hydrocarbons (TRH) which are essentially aliphatic linear and branched alkanes, alkenes and alkynes; Monocyclic Aromatic Hydrocarbons (MAH) the key compounds being Benzene, Toluene, Ethylbenzene and Xylenes; as well as Polycyclic Aromatic Hydrocarbons (PAH) most common being Naphthalene and most environmentally

problematic being benzo-a-pyrene (BaP); as well as Polycyclic Benzene Hydrocarbons (PCB)

This suite is preliminary and can be made more specific, should the preliminary data justify further investigation. Detection of volatile compounds at concentrations above threshold would trigger discrete sampling at multiple depth intervals - a more complex investigation.

**Geology &
Hydrogeology
Site History**

Geology is granodiorite. Topsoil is dark yellowish brown sandy, clayey gravel. There are 5 registered bores within 0.5 km of the site. One is yielding; three are dry. SWL is 4-14 m bgs. Site was a residential building and surrounds at the SW corner of a lot formerly occupied by NSW Agriculture/ Soil Conservation for depot storing fertilizers and above Ground Fuelling. The house was omitted from the Envirowest validation. The footprint and surrounds of the demolished building were therefore checked to supplement the partial investigation.

4.0 RESULTS

METALS	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	MERCURY	NICKEL	ZINC
mg/kg	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn
C01	<4	<0.4	20	14	26	<0.1	11	67
C02	5	0.6	27	36	160	<0.1	17	330
C03	<4	<0.4	22	12	24	<0.1	19	77
HIL A	100	20	100	7000	300	10	400	8000
HIL D	3000	800	3000	250000	1500	200	4000	400000
95% UCL/CA-HIL A	16%	10%	87%	2%	201%	3%	17%	15%
95% UCL/CA-HILD	1%	0%	3%	0%	40%	0%	2%	0%

Heavy Metals: Lead (Pb)

Discussion

Had the site been for a residential development, further investigation of the soil profile would have been likely. If C02 included three samples of comparable Lead (pb) concentration. The HIL A would not be exceeded. Compositing increases uncertainty and the threshold is decreased proportionately. Re-sampling of the C2 area, about the house would have been conducted and a greater number of discrete samples analysed. The table shows that the Commercial Threshold for Lead is 5-fold that of the Residential HIL A. The data indicate there is a 95% probability that the arithmetic average concentration of heavy metals will not exceed respective human health investigation levels for commercial development. The Development Application Requirements are therefore met.

Total Recoverable Hydrocarbons (TRH) Volatile Fraction including vTRH & MAH & Naphthalene Discussion

mg/kg	TRH C ₅ -C ₉	TRH C ₆ -C ₁₀	TRH C ₅ -C ₁₀ -Benzene	Benzene	Toluene	Ethylbenzene m+p Xylene	o-Xylene	naphthalene	Total Xylene
C1	<25	<25	<25	<0.2	<0.5	<1	<2	<1	<1
C2	<25	<25	<25	<0.2	<0.5	<1	<2	<1	<1
C3	<25	<25	<25	<0.2	<0.5	<1	<2	<1	<1
HSL-A Residential Low Density 0-1.0 m Clay	230			1.2	1600	420		1	280

No statistical analysis of the concentrations of vTRH and BTEX is warranted. None of the constituent compounds analysed was detected Limits of Reading (LOR) of the analytical methods used to quantify them. The LORs are at or below HSL-A residential thresholds. The complete lack of vTRH and BTEX indicates that if indeed there was a spill, it has likely aged and that the volatile compounds have been stripped and biodegraded with time.

TRH Semi Volatile and Non-volatile Fraction: 0-150 mm Topsoil Discussion

TRH C ₁₀ -C ₁₄	TRH C ₁₅ -C ₂₈	TRH C ₂₉ -C ₃₆	TRH C ₃₇ -C ₄₀	TRH C ₁₀ -C ₁₄	H C ₁₀ -C ₁₆ -Naphtha	TRH C ₁₅ -C ₃₄	TRH C ₃₄ -C ₄₀	Total TRH C ₁₀ -C ₄₀
<50	<100	<100	<50	<50	<50	<100	<100	<50
<50	<100	<100	<50	<50	<50	130	<100	130
<50	<100	<100	<50	<50	<50	<100	<100	<50
HSL-A Residential Low Density 0-0.1 Clay					280			

The data indicate there is a 95% probability that the arithmetic average concentration of semi-volatile TRH in the topsoil at all locations will not exceed respective human health investigation levels for Commercial development. The fact that TRH corresponding to diesel and oil has been detected would certainly warrant a more thorough investigation had the development been residential. Compositing for hydrocarbons is not typical nor recommended. If it was, and the three contributing samples had only a single contaminated sample. We would have a 200 m² area of potential concern to be further tested. Considering the 3-fold sample dilution; the exceedance is still only 40% more than the most sensitive threshold.

Organochlorine Insecticides

OC Pesticides mg/kg	α+β+γ+δ BHC	HCB	Heptachlor + Epoxide	Aldrin + Dieldrin	a+g Chlordane
C1	<0.4	<0.1	<0.2	<0.1	<0.1
C2	<0.4	<0.1	<0.2	<0.1	<0.1
C3	<0.4	<0.1	<0.2	<0.1	<0.1
HIL A		10	7	7	50
Oc Pesticides mg/kg	Endosulfan I + II + SO ₄ ²⁻	DDD + DDE + DDT	Endrin + Aldehyde	Methoxychlor	Mirex
C1	<0.3	<0.1	<0.2	<0.1	<0.1
C2	<0.3	<0.1	<0.2	<0.1	<0.1
C3	<0.3	<0.1	<0.2	<0.1	<0.1
HIL A	300	260	10	400	10

Discussion

The data indicate there is a 95% probability that the arithmetic average concentration of Organochlorine pesticides will not exceed respective human health investigation levels for residential development. This is because no pesticides were detected, and LOR should be one-order of magnitude below the most sensitive thresholds.

Polychlorinated Biphenyl

PCB mg/kg	1016	1221	1232	Aroclor 1242	1248	1254	1260	0.1 Total PCBs
C1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
C2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
C3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HIL A								1

Discussion

The data indicate there is a 95% probability that the arithmetic average concentration of polychlorinated biphenyl compounds will not exceed respective human health investigation levels for residential development, and therefore commercial development

**Polycyclic
Hydrocarbons (PAH)**

POLYCYCLIC AROMATIC HYDROCARBONS	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Naphthalene
C1	<0.1	<0.1	<0.1	0.1	<0.1	0.4	0.3	<0.1
C2	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2	<0.1
C3	<0.1	<0.1	<0.1	0.1	<0.1	0.3	0.3	<0.1
SHSL-DC: Soil Health Screening Levels for Direct Contact (mg/kg) Residential HSL-5 Low Density								
POLYCYCLIC AROMATIC HYDROCARBONS	Benzo(a)anthracene	Chrysene	Benzo(b,j,k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	TOTAL PAH	B(a)p TEQ calc 0
C1	0.1	0.1	0.3	0.2	0.2	<0.1	0.2	2
C2	0.1	<0.1	0.2	0.2	0.1	<0.1	0.1	1.3
C3	0.1	0.1	0.3	0.2	0.2	<0.1	0.1	1.6
SHSL-DC: Soil Health Screening Levels for Direct Contact (mg/kg) Residential HSL-5 Low Density								

Discussion

The data indicate there is a 95% probability that the arithmetic average concentration of PAH in will not exceed respective human health investigation levels for residential development and therefore commercial development

Abbreviations

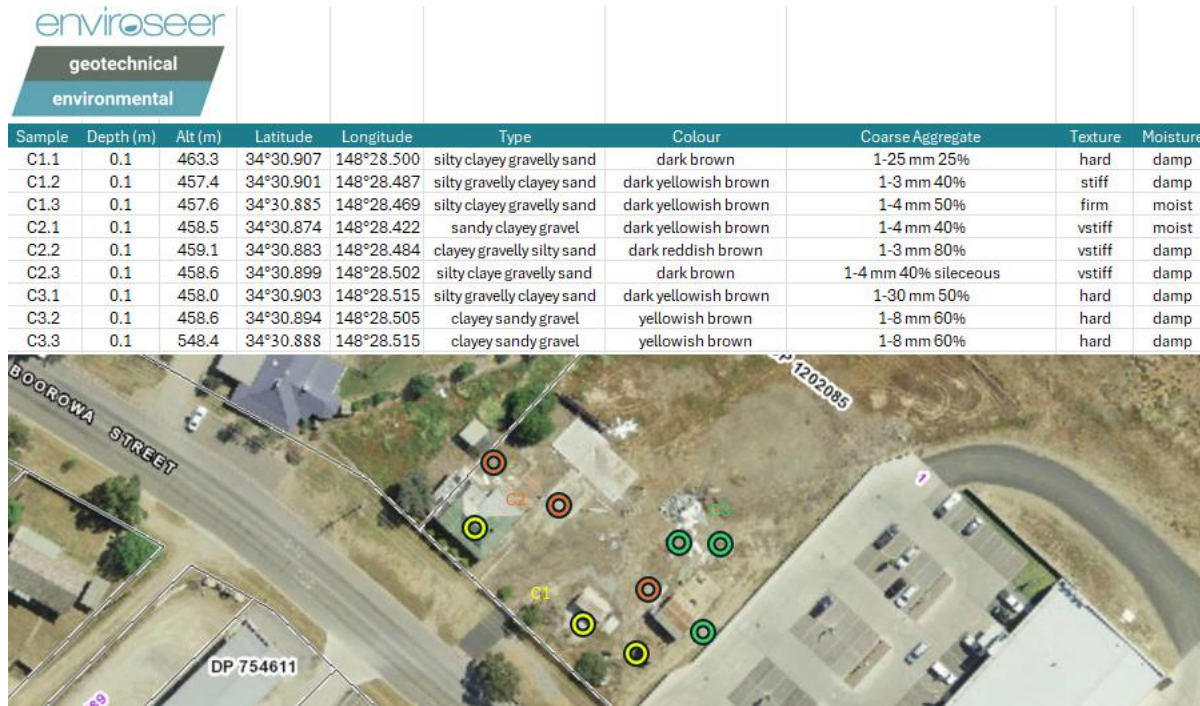
AST Above-ground Storage Tank HIL Health Investigation Level HSL Health Screening Level GL Guideline Threshold CAGL Composite Adjusted Guideline Level 95% UCL 95% Upper Confidence Limit OCP Organochlorine Pesticide OPP Organophosphate Pesticides LOR Limit of Recording

5.0 CONCLUSIONS & RECOMMENDATIONS

Concentrations of Contaminants of Potential Concern in topsoil taken from the SW 1800 m² of the former Soil Conservation Depot Building on **LOT 1 DP1202085, 323 Boorowa Street YOUNG NSW 2594** were below respective thresholds for Commercial Development .

The preliminary nature of the investigation is sufficient for the proposed development. A more detailed investigation of the former building BE would certainly be warranted should future residential development be proposed. Specifically discrete topsoil and subsoil samples at a density of 1/100 m² for CoPc: svTRH, Lead and Zinc.

6.0 LOCATION SKETCH



5.1 FIELD LOG

Date: 28/02/2025

Customer Job: 501CO

Job Number: 25016

Site Address: LOT 1 DP 1202085 323 BOOROWA STREET YOUNG NSW 2594

Borehole: C01-03

Surface RL: 463.3

Latitude: -34°30.740-907

Longitude: 148°28.472-502

[illegible]

7.0 COC

 CHAIN OF CUSTODY - Client ENVIROLAB GROUP - National phone number 1300 42 43 44						Sydney Lab - Envirolab Services 12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au Perth Lab - MPL Laboratories 16-18 Hayden Crt Myaree, WA 6154 Ph 08 9317 2505 / lab@mpl.com.au Melbourne Lab - Envirolab Services 1A Dalmore Drive Scoresby VIC 3179 Ph 03 9763 2500 / melbourne@envirolab.com.au Brisbane Office - Envirolab Services 20a, 10-20 Depot St, Banyo, QLD 4014 Ph 07 3266 9532 / brisbane@envirolab.com.au Adelaide Office - Envirolab Services 7a The Parade, Norwood, SA 5067 Ph 0406 350 706 / adelaide@envirolab.com.au								
Client: Enviroseer			Client Project Name / Number / Site etc (ie report title):											
Contact Person: James Milson			327 Boorowa Road YOUNG NSW											
Project Mgr: James			PO No.: 25017											
Sampler: James			Envirolab Quote No.: see JEREMY FAIRCLOTH 27/2/24											
Address:			Date results required: standard											
3004 Cargo Road CARGO 2800			Or choose: standard / same day / 1 day / 2 day / 3 day											
			Note: Inform lab in advance if urgent turnaround is required - surcharges apply											
Phone: NA Mob: 04 2861 9282			Report format: esdat / equis /											
Email: info@enviroseer.com.au			Lab Comments:											
Sample information						Tests Required						Comments		
Envirolab Sample ID	Client Sample ID or information	Depth (m)	Date sampled	Type of sample	COMBO: 8 Metals As Cd Cr Cu Hg Ni Pb Zn + OC Pesticides + TRH + BTEX + PAH + PCB									Provide as much information about the sample as you can
1	C1	0.15	28-Feb-25	soil	X									SILTY GRAVELLY CLAYEY SAND, dark yellowish brown co.og. 1-3 mm 40% 457.4 34*30901 148*28487
2	C2	0.15	28-Feb-25	soil	X									CLAYEY SILTY GRAVELLY SAND dark reddish brown, co.og. 1-3 mm 30% 459.1 34*30883 148*28484
3	C3	0.15	28-Feb-25	soil	X									CLAYEY SANDY GRAVEL yellowish brown co.og. 1-3 mm 40% 458.6 34*30894 148*28505
Relinquished by (Company): Enviroseer			Received by (Company): PLS SYD			Lab use only:								
Print Name: James Milson			Print Name: Kathy Wayne			Samples Received: Cool or Ambient (circle one)								
Date & Time: 5/03/2025 17:00			Date & Time: 7/3/25 0900			Temperature Received at: 6°C (if applicable)								
Signature: 			Signature: 			Transported by: Hand delivered / courier								

White - Lab copy / Blue - Client copy / Pink - Retain in Book Page No:

8.0 SAMPLE RECEIPT



Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details	
Client	Enviroseer
Attention	James Milson

Sample Login Details	
Your reference	327 Boorowa Road Young NSW
Envirolab Reference	374958
Date Sample Received	07/03/2025
Date Instructions Received	07/03/2025
Date Results Expected to be Reported	14/03/2025

Sample Condition	
Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	3 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments
Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Invoice will be emailed separately. Results will be reported only if payment has been made. Details of analysis on the following page:



Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	pH (EC-10) (RTDN) in Soil	acTH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil
C1-0.15	✓	✓	✓	✓	✓	✓
C2-0.15	✓	✓	✓	✓	✓	✓
C3-0.15	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default).

TAT for Micro is dependent on incubation. This varies from 3 to 8 days.

9.0 CERTIFICATE OF ANALYSIS (KEY DATA)



EnviroLab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chaulwood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Client Reference: 327 Boorowa Road Young NSW

CERTIFICATE OF ANALYSIS 374956

Client Details

Client	Enviroseer
Attention	James Milson
Address	PO Box 2519, Orange, NSW, 2800

Sample Details

Your Reference	327 Boorowa Road Young NSW
Number of Samples	3 Soil
Date samples received	07/03/2025
Date completed instructions received	07/03/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	14/03/2025
Date of Issue	10/04/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *

VTRH(C10-C16)BTEX in Soil

Our Reference	UNITS	374956-1	374956-2	374956-3
Your Reference		C1	C2	C3
Depth		0.15	0.15	0.15
Date Sampled		28/02/2025	28/02/2025	28/02/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	10/03/2025	10/03/2025	10/03/2025
Date analysed	-	11/03/2025	11/03/2025	11/03/2025
TRH C ₁₀ - C ₁₆	mg/kg	<25	<25	<25
TRH C ₁₀ - C ₁₆	mg/kg	<25	<25	<25
VTRH C ₁₀ - C ₁₆ less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m-p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1
Surrogate a,a-a-Trifluorobenzene	%	101	101	103

Results Approved By

Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Steven Luong, Senior Chemist
Timothy Toll, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

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Client Reference: 327 Boorowa Road Young NSW

Client Reference: 327 Boorowa Road Young NSW

VTRH (C10-C40) in Soil

Our Reference	UNITS	374956-1	374956-2	374956-3
Your Reference		C1	C2	C3
Depth		0.15	0.15	0.15
Date Sampled		28/02/2025	28/02/2025	28/02/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	10/03/2025	10/03/2025	10/03/2025
Date analysed	-	12/03/2025	12/03/2025	12/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50
TRH C ₁₅ - C ₂₀	mg/kg	<100	<100	<100
TRH C ₂₁ - C ₂₆	mg/kg	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C ₁₄ -C ₂₀	mg/kg	<100	130	<100
TRH >C ₂₄ -C ₄₀	mg/kg	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	130	<50
Surrogate o-Terphenyl	%	89	93	88

PAHs in Soil

Our Reference	UNITS	374956-1	374956-2	374956-3
Your Reference		C1	C2	C3
Depth		0.15	0.15	0.15
Date Sampled		28/02/2025	28/02/2025	28/02/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	10/03/2025	10/03/2025	10/03/2025
Date analysed	-	11/03/2025	11/03/2025	11/03/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.4	0.2	0.3
Pyrene	mg/kg	0.3	0.2	0.3
Benzo(a)anthracene	mg/kg	0.1	0.1	0.1
Chrysene	mg/kg	0.1	<0.1	0.1
Benzo(b,j,k)fluoranthene	mg/kg	0.3	0.2	0.3
Benzo(a)pyrene	mg/kg	0.2	0.2	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	0.1	0.1
Total +ve PAHs	mg/kg	2.0	1.3	1.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(POL)	mg/kg	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	118	116	119

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Address: LOT 1 DP 1202085 323 BOOROWA STREET YOUNG NSW 2594

28/05/2025

Job Number: 25016a

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Organochlorine Pesticides in soil				
Our Reference		374956-1	374956-2	374956-3
Your Reference	UNITS	C1	C2	C3
Depth		0.15	0.15	0.15
Date Sampled		28/02/2025	28/02/2025	28/02/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	10/03/2025	10/03/2025	10/03/2025
Date analysed	-	11/03/2025	11/03/2025	11/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTf	%	135	128	131
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1

PCBs in soil				
Our Reference		374956-1	374956-2	374956-3
Your Reference	UNITS	C1	C2	C3
Depth		0.15	0.15	0.15
Date Sampled		28/02/2025	28/02/2025	28/02/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	10/03/2025	10/03/2025	10/03/2025
Date analysed	-	11/03/2025	11/03/2025	11/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	124	122	119

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Client Reference: 327 Boorowa Road Young NSW

Client Reference: 327 Boorowa Road Young NSW

Acid Extractable metals in soil				
Our Reference		374956-1	374956-2	374956-3
Your Reference	UNITS	C1	C2	C3
Depth		0.15	0.15	0.15
Date Sampled		28/02/2025	28/02/2025	28/02/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	10/03/2025	10/03/2025	10/03/2025
Date analysed	-	10/03/2025	10/03/2025	10/03/2025
Arsenic	mg/kg	<4	5	<4
Cadmium	mg/kg	<0.4	0.6	<0.4
Chromium	mg/kg	20	27	22
Copper	mg/kg	14	36	12
Lead	mg/kg	26	160	24
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	11	17	19
Zinc	mg/kg	67	330	77

Moisture				
Our Reference		374956-1	374956-2	374956-3
Your Reference	UNITS	C1	C2	C3
Depth		0.15	0.15	0.15
Date Sampled		28/02/2025	28/02/2025	28/02/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	10/03/2025	10/03/2025	10/03/2025
Date analysed	-	11/03/2025	11/03/2025	11/03/2025
Moisture	%	5.8	6.9	3.3

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Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105±5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-021/022/025	Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (C10-C40). Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MS/MS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MS/MS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MS/MS. Note, the Total +ve reported DOD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individual report DOD+DDE+DDT.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN In Soil				Duplicate				Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]	
Date extracted	-			10/03/2025	[NT]	[NT]	[NT]	[NT]	10/03/2025	[NT]	
Date analysed	-			11/03/2025	[NT]	[NT]	[NT]	[NT]	11/03/2025	[NT]	
TRH C6 - C10	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	116	[NT]	
TRH C6 - C10	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	116	[NT]	
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	114	[NT]	
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	116	[NT]	
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]	
m-p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	119	[NT]	
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	121	[NT]	
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]	
Surrogate 3aa-Trifluorotoluene	%		Org-023	103	[NT]	[NT]	[NT]	[NT]	113	[NT]	

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. EQ PQL values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. EQ zero values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. EQ half PQL values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH (C10-C40) In Soil				Duplicate				Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]	
Date extracted	-			10/03/2025	[NT]	[NT]	[NT]	[NT]	10/03/2025	[NT]	
Date analysed	-			12/03/2025	[NT]	[NT]	[NT]	[NT]	12/03/2025	[NT]	
TRH C10 - C40	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	99	[NT]	
TRH C10 - C40	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	97	[NT]	
TRH C10 - C40	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]	
TRH C10 - C40	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	99	[NT]	
TRH C10 - C40	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	97	[NT]	
TRH C10 - C40	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]	
Surrogate o-Terphenyl	%		Org-020	90	[NT]	[NT]	[NT]	[NT]	103	[NT]	

QUALITY CONTROL: PAHs in Soil				Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]
Date extracted	-			10/03/2025	[NT]	[NT]	[NT]	[NT]	10/03/2025 [NT]
Date analysed	-			11/03/2025	[NT]	[NT]	[NT]	[NT]	11/03/2025 [NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100 [NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	108 [NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100 [NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102 [NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	104 [NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	104 [NT]
Benzo[a]anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94 [NT]
Benzo[b]fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo[a]pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	140 [NT]
Indeno[1,2,3-c,d]pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenz[a,h]anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo[g,h,i]perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	111	[NT]	[NT]	[NT]	[NT]	117 [NT]

QUALITY CONTROL: Organochlorine Pesticides in soil				Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]
Date extracted	-			10/03/2025	[NT]	[NT]	[NT]	[NT]	10/03/2025 [NT]
Date analysed	-			11/03/2025	[NT]	[NT]	[NT]	[NT]	11/03/2025 [NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106 [NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114 [NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100 [NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92 [NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	116 [NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
pp-ODE	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	108 [NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	122 [NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	108 [NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
pp-ODD	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	130 [NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	130 [NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTf	%		Org-022/025	124	[NT]	[NT]	[NT]	[NT]	125 [NT]

QUALITY CONTROL: PCBs in Soil				Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]
Date extracted	-			10/03/2025	[NT]	[NT]	[NT]	[NT]	10/03/2025 [NT]
Date analysed	-			11/03/2025	[NT]	[NT]	[NT]	[NT]	11/03/2025 [NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	109 [NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	125	[NT]	[NT]	[NT]	[NT]	118 [NT]

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]
Date prepared	-			10/03/2025	[NT]	[NT]	[NT]	[NT]	10/03/2025 [NT]
Date analysed	-			10/03/2025	[NT]	[NT]	[NT]	[NT]	10/03/2025 [NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	117 [NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	105 [NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107 [NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107 [NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	94 [NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106 [NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107 [NT]

CONDITIONS OF THE RECOMMENDATIONS

- This is a Level 1 classification report generally in accordance with NSW EPA and NEPM guidance on contaminated site investigation and should be sufficient for a qualified person to ascertain the consequence of its findings.
- This site contamination report was completed by an experienced soil technician and does not make any allowance for the lot outside of the building envelope and house yard.
- The advice given in this report assumes that the test results are representative of the overall subsurface conditions. However, it should be noted that actual conditions in some parts of the site may differ from those found in the boreholes. If excavations reveal soil conditions significantly different from those shown in our attached Borehole Log(s), enviroseer should be consulted and excavations stopped immediately.
- Any sketches in this report should be considered as only an approximate pictorial evidence of our work. Therefore, unless otherwise stated, any dimensions or slope information should not be used for any building cost calculations and/or positioning of the building. Dimensions on logs are correct.

REPORT LIMITATIONS

The investigations addressed in this report are the minimum required to satisfy the statistical limits for a designated area. They are not intended nor designed to locate all possible ground conditions on the site. It is not possible to identify all possible ground conditions. Further, while anomalies are usually detected by site visit and historical searches, the potential for undisclosed hotspots of CoPC arising from undisclosed spillage or dumping cannot be entirely removed.

The advice and recommendations contained in this report are based on analyses obtained from the samples tested, and on the assumption that those test results are representative of the overall ground conditions of the entire building envelope and house yard. The actual conditions in some parts of the site might differ from those tested.

The scope and relevance of the advice provided in the report is subject to restrictions and limitations. enviroseer did not perform a complete assessment of all possible conditions, contaminants or circumstances that may exist on the site. If a service is not expressly indicated that means it has not been provided, and the reader should not assume that it has been. If a matter is not specifically addressed then enviroseer has not made a determination in relation to it, and the reader should not assume that it has.

Where data and information has been supplied by the client or a third party, the accuracy of the advice and recommendations in this report is dependent upon the accuracy of that data and information. enviroseer is not responsible for verifying the accuracy of data or information provided to it by third parties. enviroseer is not liable nor responsible for inaccurate advice provided upon reliance of incomplete or inaccurate data supplied by third parties.